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Larson

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(54) **MATTRESS FIRMNESS TESTING PROCESS AND SYSTEM**

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See application file for complete search history.

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(57) **ABSTRACT**

A system for evaluating failure of a used mattress includes a test device and computerized test device control module. The test device includes a plunger arm, a control motor attached to a first end of the plunger arm and configured to selectively extend and retract the plunger arm, and a platen attached to an end of the plunger arm distal from control motor. The control module includes a computerized processor, operating programming to evaluate the failure of the mattress. The programming includes controlling extension of the plunger arm, monitoring firmness in the mattress based upon force applied by the platen on the mattress and displacement of the plunger arm, monitoring a threshold firmness value for comparison, comparing the threshold firmness value to the monitored firmness, and generating a result of the comparison indicating the failure of the mattress.

4 Claims, 9 Drawing Sheets